



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/006,203	12/10/2001	Huang Chih Sheng	HUAN3091/EM/7270	9034
23364	7590	09/06/2005	EXAMINER	
BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314			AHMED, SALMAN	
			ART UNIT	PAPER NUMBER
			2666	

DATE MAILED: 09/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.



## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Mahany et al. (US PAT 6654378), hereinafter referred to as Mahany.

In regards to claims 1-3, a signal propagation method for propagating a wireless signal from a first access point of a first wireless network to a second access point of a second wireless network comprising steps of: providing a third access point for transmitting and receiving wireless signal; transmitting wireless signal from first access point to third access point; and transmitting wireless signal from third access point to second access

point; first wireless network is a wireless local area network and second wireless network is a wireless local area network is anticipated by figure 6, where access point 81 represents the first access point, 83 represents the third access point and 90 represents the second access point.

In regards to claim 4, the third access point operating steps of: receiving a package of said wireless signal, reading a source address of said package; reading a destination address of said package, and sending said package from said first access point to said second access point provided said source address is correspondent to said first access point and said destination address is correspondent to said second access point is anticipated by (figure 6, column 15 lines 57-67, column 16 lines 1-6) the steps of terminal 87 communicating with the printer 95 via the premises network. In particular, the terminal 87 sends data destined for the printer 95 to the access device 85 using a higher power transmission. The access device 85 examines its routing table attempting to identify the printer 95 in an upstream path. Upon failing to find an entry for the printer 95, the access device 85 sends the data downstream to the access device 83. The access device 83 similarly fails to identify the printer 95 and forwards the data downstream to the root, the access device 81. The access device 81 identifies the printer 95 in an upstream path and routes the data upstream to the access device 90. Finally, the access device 90 participates in a peripheral LAN with the printer 95 at a lower power level to complete the delivery of the data to the printer 95.

In regards to claim 5, third access point being a wireless repeater is anticipated by (column 14 lines 31-34) an access point being a relaying device, receives data or other information, and relays toward the destination.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mahany, in view of Chhaya et al., "Throughput and fairness properties of asynchronous data transfer methods in the IEEE 802.11 MAC protocol," in Proc. IEEE PIMRC '95, Toronto, Canada, Sept. 27-29, 1995, pp. 613-617, hereinafter referred to as Chhaya.

Mahany teaches using multiple access points to communicate data as described in the rejection of claim 1 above.

Mahany does not explicitly teach using protocols like IEEE 802.11 for communication between access points in WLAN.

Chhaya teaches IEEE 802.11 being used in a WLAN environment. Chhaya teaches page 614, section 3 Performance Modeling of 802.11 WLANs) performance evaluation of 802.11 MAC protocol poses several new challenges that require innovative solutions. The presence of hidden stations, use of carrier sensing in a wireless environment, and decentralized nature of communication, i.e., without the intervention of the AP; These are some of the key factors whose impact on system performance need to be carefully evaluated. In WLAN systems the performance observed by stations is not identical; it is expected to be a function of not only their location but the location of other stations as well.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Mahany's teaching by incorporating Chhaya's teaching of using IEEE 802.11 protocol. The motivation is that routable protocols like IEEE 802.11 is more suitable for communication in WLAN related architecture than other similar protocols as suggested by Chhaya (page 613, section 1 Introduction, to satisfy the

needs of wireless data networking, study group 802.11 was formed under IEEE project 802 to recommend an international standard for Wireless Local Area Networks (WLANs)).

**6. Prior art pertinent to the application but not used in office action:**

- US 6243581 B1                      USPAT              Method and system for seamless roaming between wireless communication networks with a mobile terminal  
Jawanda; Jastinder
- US 5903548 A                      USPAT              Portable electronic communications device having switchable LAN/WAN wireless communications features  
Delamater; Jeff
- US 5726984 A                      USPAT              Hierarchical data collection network supporting packetized voice communications among wireless terminals and telephones    Kubler; Joseph J. et al.
- US 6862448 B1                      USPAT              Token-based receiver diversity    Bims; Harry
- US 6452910 B1                      USPAT              Bridging apparatus for interconnecting a wireless PAN and a wireless LAN Vij; Vikram et al.
- US 5953507 A                      USPAT              Method and apparatus for providing a 3-way connection between a mobile computing device, a stationary computing device and a computer network    Cheung; Roger Yiu Ming et al.

- US 20050153725 A1 US-PGPUB Mobile mesh Ad-Hoc networking  
Naghian, Siamak et al.
- US 6659947 B1 USPAT Wireless LAN architecture for integrated  
time-critical and non-time-critical services within medical facilities Carter; Scott  
J. et al.
- A Scalable Wireless Virtual LAN Zhao Liu, Malathi Veeraraghavan, and Kai Y.  
Eng Bell Labs, Lucent Technologies
- BAHAMA: a broadband ad-hoc wireless ATM local-area network  
Eng, K.Y.; Karol, M.J.; Veeraraghavan, M.; Ayanoglu, E.; Woodworth, C.B.;  
Pancha, P.; Valenzuela, R.A.;
- Wireless ATM LAN with and without infrastructure  
Yonggang Du; Herrmann, C.; May, K.P.; Hulyalkar, S.N.; Evans, D.;

### ***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Salman Ahmed whose telephone number is (571)272-8307. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571)272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Salman Ahmed  
Examiner  
Art Unit 2666

SA

*Seema S. Rao*  
SEEMA S. RAO 9/1/05  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600